

## **REMARKS**

This Amendment is submitted preliminary to the issuance of an Office Action in the present application and in response to the Official Action of November 2, 2006.

The Examiner's withdrawal of the earlier rejections is noted with appreciation.

As to the claim objection/rejections in the last Office Action, applicant has amended the application by rewriting claim 76 in independent form as claim 85 as suggested by the Examiner; claim 77 was amended to now depend on new claim 85.

## **REJECTIONS UNDER 35 U.S.C. §112, SECOND PARAGRAPH**

Applicant has amended claim 75 to delete the phraseology ...enter into a chemical reaction...

With respect to claims 80, 81 and 83, applicant has amended the claims to eliminate the rejections thereof.

Withdrawal of the rejection under 35 U.S.C. §112, second paragraph relative to claims 76, 77, 80, 81 and 83 is respectfully requested.

## **REJECTIONS UNDER 35 U.S.C. §112, FIRST PARAGRAPH RELATING TO CLAIMS 75, 80 AND 83**

### ***"SUPPORT"***

The Examiner has taken the position that a solid support was claimed in the original claims, but that other than a solid support is not supported by the description and therefore considered new matter.

Applicant disagrees with the Examiner to the extent that the original claims recited "support" and not "solid support". The description recites predominantly

"support", which is too numerous to recite for every instance, but which can be found by applying the find function of the computer. The description also defines "solid support". In that manner, applicant claims a basis for reciting "support" since limitations in the description cannot be read into the claims. However, applicant, in order to gain early issuance has amended the claims to recite solid support.

#### "SURFACE"

The Examiner has taken the position that the "support" without the term "surface" is not supported by the description. Applicant disagrees with the Examiner and states that the description supports the two-dimensionality as well as the three-dimensionality of the support. Support for this is found in paragraph [007] and [008]. The Examiner's attention is also directed to paragraph [0179] - [0180] relating to Figure 20 and the description thereof. It is believed that there are ample references in the description that support the use of "support".

With respect to the Examiner's comment regarding claim 75, applicant has eliminated the phraseology "repeating the foregoing steps" and thus the rejection is moot.

With regard to the Examiner's rejection of claim 83 based on the phraseology "wherein the immobilized peptide or nucleic acid monomers are temporarily blocking a coupling reaction of the monomers to the support by the reversibly immobilized monomers", applicant disagrees with the Examiner's assessment that this represents new matter and states that the description supports this element of the claim. The claims are not required to recite *in haec verba* what is in the description. From the description, for example the Figures, in particular Figs. 1, 4 5 and 9 it is implicit that there is a temporary blocking.

Also, on page 2, paragraph [015], the conventional method is contrasted to the instant method where monomers can be applied at different times to a support and at the same time block the coupling reaction of the monomer to the support. Furthermore, on page 3, paragraph [026], it is set forth that the particles are repeatedly applied to the support... in each case followed by the mobilization of

the immobilized substance described above, linking... and detaching the temporary protective group. While this could be worded more artfully, the paragraph describes the advantage of the present method where the monomers can be applied at different times to a support and at the same time block the coupling reaction of the monomers to the support. See also paragraph [093] relating to Fig. 5 Ia and Ib.

#### **REJECTIONS OF CLAIMS 54,56-64, 66-71 AND 75-83 UNDER 35 U.S.C. §112, FIRST PARAGRAPH**

With respect to the Examiner's statement that "applying" is too broad, applicant has narrowed the claims by reciting the laser means or the laser printing as also stated by the Examiner. See also paragraph [054]. It is also within the scope of the disclosure that the arrays of microlasers are used (see paragraph [027]. Also, claim 80 was amended to recite the mobilizing technique by supplying energy or by using a solvent. See also paragraph [031].

It is believed that the claims as amended overcome the rejections on written description and that all features of the claims are supported by the description. Withdrawal of the rejections of claims 54, 56-64, 66-71 and 75-83 under 35 U.S.C. §112, first paragraph is respectfully requested.

The Examiner's citation of Calvert (Inkjet Printing for Materials and Devices. Chem. Mater. 2001) on page 9 of the Office Action is noted. The claim does read on transfer units in a solid state of aggregation. It is known that copy print has to be ultimately extremely precise due to the nature of desired print; the same precision is not necessarily required for transfer of nucleic acid or amino acid monomers for a combinatorial library. Since the PSITA need not be the expert in copy printing technique, no undue experimentation is required. Calvert describes in detail the difficulties in printing particles in the solid state of aggregation, namely on page 3301 that the particle load within emulsions shouldn't exceed 5% (v/v). In

other words, Calvert states that ink jet printed emulsions with <5% particle load works. Please note that 5% load of transfer units in a solid state of aggregation is much more than is needed for combinatorial synthesis according to the applicant's method, not to mention the quite obvious possibility to print the layer more than one time.

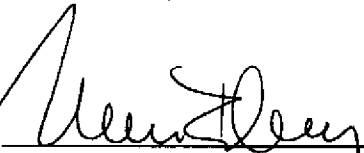
With respect to the Examiner's rejection on pages 10 regarding the Lauf reference is not fully understood and applicant would need more information to fully understand the Examiner's position. Lauf describes combinatorial *mixing* of larger batches of different ceramics ingredients. The applicant restricted claims to the combinatorial *synthesis* with the help of amino acid and oligonucleotide monomers. Therefore, we think that the Examiner's rejection based on the Lauf reference doesn't read on applicant's claims.

With respect to the Examiner's rejection based on the teaching of Yan & Gremlich, applicant has obviated the rejection by amending the claims to recite a *suitable* support. It is believed that such wording is acceptable especially in contexts such as this. Applicant further submits that as far as can be discerned the combinatorial chemistry of Yan & Gremlich is different from that of applicant and they are using apparently large beads, where hydrophilicity influences the reaction rates for such substrates. In other words, in Yan & Gremlich's approach reactants must diffuse >50µm, still the reaction speed analyzed in detail by Yan & Gremlich for different supports was comparable except for one example. Applicant e-mailed Dr. Gremlich who confirmed that the analyzed beads are quite large. In this respect, the Examiner is also directed to paragraphs [0108] and [0115]. Moreover, Yan & Gremlich describe the combinatorial synthesis of non-standard oligomers. The applicant restricted claims to the combinatorial synthesis with the help of amino acid and oligonucleotide monomers. Therefore, we think that the Examiner's rejection based on the Yan & Gremlich reference doesn't read on applicant's claims.

In view of the above, each of the presently pending claims in this application is considered patentably differentiated over the prior art of record and believed to be in immediate conditions for allowance. Reconsideration and allowance of the present application are thus respectfully requested.

Should the Examiner consider necessary or desirable any formal changes anywhere in the specification, claims and/or drawing, then it is respectfully requested that such changes be made by Examiner's Amendment, if the Examiner feels this would facilitate passage of the case to issuance. If the Examiner feels that it might be helpful in advancing this case by calling the undersigned, applicant would greatly appreciate such a telephone interview.

Respectfully submitted,

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